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**From:** Craig, Harry [Craig.Harry@epa.gov]  
**Sent:** 4/26/2017 4:44:23 PM  
**To:** Shuster, Kenneth [Shuster.Kenneth@epa.gov]; Galbraith, Michael [Galbraith.Michael@epa.gov]; Gaines, Jeff [Gaines.Jeff@epa.gov]; Gerhard, Sasha [Gerhard.Sasha@epa.gov]; Kohler, Amanda [Kohler.Amanda@epa.gov]; Crosby-Vega, Terri [Crosby-Vega.Terri@epa.gov]  
**CC:** Wanslow, Julie [Wanslow.Julie@epa.gov]; Wilson, Michaelle [Wilson.Michaelle@epa.gov]  
**Subject:** RE: Photo of 4/11/17 cage burn at HSAAP and request for information

Ken,

The amount of soot that occurs is generally a function of the oxygen balance and detonation efficiency of the explosives burned or detonated. Less oxygen balanced explosives such as TNT are "sootier" than RDX or Comp B. PM10 and PM2.5 should generally be the particulate contaminants of interest in addition the unreacted energetics (TNT, RDX, HMX, etc.)

Harry

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**From:** Shuster, Kenneth  
**Sent:** Wednesday, April 26, 2017 6:51 AM  
**To:** Galbraith, Michael <Galbraith.Michael@epa.gov>; Gaines, Jeff <Gaines.Jeff@epa.gov>; Gerhard, Sasha <Gerhard.Sasha@epa.gov>; Kohler, Amanda <Kohler.Amanda@epa.gov>; Crosby-Vega, Terri <Crosby-Vega.Terri@epa.gov>  
**Cc:** Wanslow, Julie <Wanslow.Julie@epa.gov>; Wilson, Michaelle <Wilson.Michaelle@epa.gov>; Craig, Harry <Craig.Harry@epa.gov>  
**Subject:** FW: Photo of 4/11/17 cage burn at HSAAP and request for information

FYI: Another photo and (reasonable) request from Judge Toohey.

**From:** Mark Toohey [Personal Email / Ex. 6]  
**Sent:** Wednesday, April 26, 2017 9:45 AM  
**To:** Ronnie Wilhoit <Ronnie.Wilhoit@tn.gov>  
**Subject:** Photo of 4/11/17 cage burn at HSAAP and request for information

Dear Mr. Wilhoit:

Attached please find a picture of the 4/11/17 open burning at HSAAP. I forwarded a copy of the picture to a chemist who then inquired what types of chemicals were in the plume and what items were being open burned. The picture, as you can see, depicts a darker smoke than we usually see at Holston. Please make this inquiry a part of the official investigation in this case, and post it in your database. I would also like to know why HSAAP and BAE claim there is no alternative to open burning this particular explosive waste. Thank you for your anticipated cooperation.

Sincerely,

Mark Toohey



Holston April 11, 2017 cage open burn.jpg

